

demned as "bad," and denied all opportunity and incentive to be better. I know that when I spoke a few kind words to her that day at the poorhouse, she threw her arms around my neck and sobbed, and tried to tell me something which showed that she was not past being reached by good influences, such as would have been thrown around her in the University hospital. There, no one's estimate of her character would have stood in the way of the best help the state could have given a child so terribly sinned against as she had been, and then consigned to the tender mercies of jail and poorhouse.

This child stated, to our visiting nurse, that she had never had any medical treatment whatever since she had been in the almshouse, where she was sent because she could not enter a state juvenile institution until she was cured!

Conditions such as these go far to show why women—intelligent and able women, not servile ones, should have, not only *positions* in such institutions, but a share of *power*, so that these evils, all of which lie strictly in the sphere of *housekeeping* and *nursing*,—two spheres which have always been lauded as women's own—might not occur. How I wish that our women's eyes everywhere might be opened to realize that only by possessing their rightful share of our municipal and state and national government can they ever hope to claim their right and their duty of carrying the standards of good homes into public institutions. What selfishness to think only of one's *own* home! Well might Mrs. Crane entitle one of her public talks "*The Wrong of Minding One's Own Business.*"

LESSONS IN DIETETICS

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THEA, TEA

TEA was introduced into Europe by the Dutch East India Company in 1610. On account of its high price, it was used sparingly at first, but as it has been grown more cheaply, its use has been greatly increased. Until 1862, tea was mostly obtained from China, but it is now grown in Japan, Ceylon and North Carolina as well. Its use in this country has been estimated to reach six pounds annually, per person. The plant flushes, or sends out young shoots, four times in the year, and is picked at each flush. In China and Japan the best tea is obtained from the first flushing, but in India and Ceylon this is not the case. The

different varieties of tea are named from the different leaves from which it is produced. The upper leaf is known as the pekoe which is the most choice; the lower leaves have different names and are less choice.

The treatment of the leaves after being picked varies according to the kind of tea to be produced, black or green. For the production of black tea, the leaves are withered in the sun, then rolled till they become soft and mashy, the object of this being to break up the fibre and cells of the leaf and liberate the constituents, so that they are afterwards more easily extracted. They are then made into balls and allowed to ferment. During the process of fermentation, some of the tannic acid in the leaves appears to be oxidized and converted into less soluble forms, while more essential oils seem to be produced and a certain amount of bitterness developed. After fermentation is complete, the leaves are oven dried, and then fired in a furnace.

For the production of green tea, the fresh leaves are withered in hot pans at a temperature of one hundred and sixty degrees F. (Chinese method), or steamed (Japanese method); then rolled to break them up and liberate their juices; then withered again, sweated in bags, and finally submitted to a prolonged and slow roasting.

On an average, one may say that the proportions of the active ingredients in ordinary teas are as follows:

Caffeine.....	2.4 per cent.
Tannic acid.....	10-12 per cent.
Volatile oil.....	$\frac{1}{2}$ per cent.

If tea is infused for five minutes in the usual way about twenty-five per cent. of the weight of the leaf goes into solution. In the ordinary cupful of tea, is found about fifteen grains of solid matter. The caffeine is so soluble that it is practically all dissolved out of the leaf immediately infusion has begun. This is not the case with the tannic acid. There is, certainly, less tannic acid after three minutes infusion than after five and less after five than after ten; but beyond that one does not find much increase, for by that time practically the whole of the soluble matters have been extracted from the leaf.

The addition of milk or cream is to be commended on hygienic grounds, for the albuminous matter of the milk tends to throw down some of the tannic acid of the tea in an insoluble form. Sugar does not in any way increase the healthfulness of the beverage but adds considerably to its nutritive value. All second brews should be avoided.

COFFEE

Coffee was introduced into this country in 1652. It is derived from *Coffoea Arabica*, originally produced, as the name implies, in Arabia, but now cultivated in many tropical countries. The plant produces three harvests annually, the fruit resembling a cherry, in which the coffee bean corresponds to the stone. The bean consists of two halves placed face to face and enclosed in a husk. The pulp is softened by fermentation and removed, and the beans, still enclosed in their husk, are dried in the air. The husk is separated by rolling and the beans are then separated from the delicate parchment-like skin which covers them, and are assorted according to size.

The common varieties are: Mocha, Myson, Ceylon, Costa Rica, Java, and Brazil.

In order to prepare the beverage, the berries must first be roasted. The chief physical change which results from roasting is that the berries are rendered brittle and can now be ground. Chemically, they lose from thirteen to twenty per cent. of their weight, mostly moisture, caffeine and fat. The most important substance produced in the coffee by roasting is an oil, *caffeol*, to which the aroma of coffee is due. The ground coffee bean is used in the making of the infusion which is used as a beverage. From twenty-five to thirty-five per cent. of the coffee used in making the infusion goes into solution. Coffee may be adulterated, when sold as ground coffee, with roasted and ground beans or with chickory, the root of the wild endive, kiln dried and broken. The secret of having good coffee is to make it strong and to make it hot. Three parts of milk to one of coffee is about the proper proportion of *café au lait*.

Coffee is used as a diuretic, a heart or brain stimulant and a stomachic. It is valuable in the treatment of opium-poisoning. Taken in excess, coffee will cause dyspepsia, nervousness, wakefulness, muscular tremors and palpitation of the heart. Coffee owes its activity to its alkaloid, caffeine, which is identical with thein, the alkaloid of tea.

(To be continued.)



CORROSIVE SUBLIMATE.—It is said that much less pain is caused by solutions of bichloride of mercury when applied to mucous or raw surfaces if they are made up with normal salt solution instead of water.